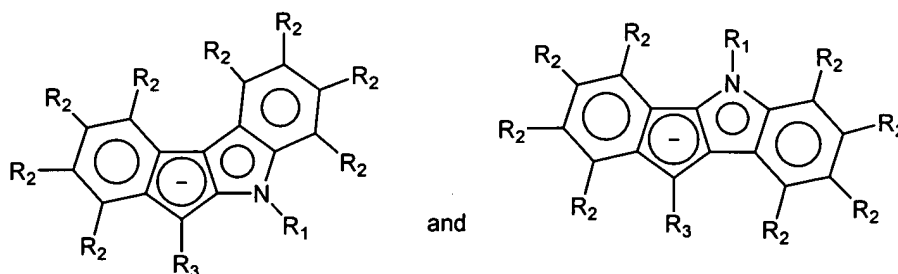


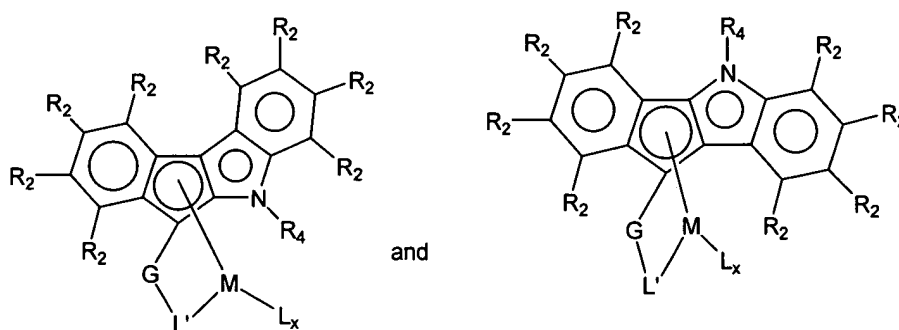
1. (currently amended): A process which comprises polymerizing an olefin in the presence of an activator and a supported organometallic complex, wherein the supported organometallic complex is prepared by treating a support with about 0.1 to about 2 moles of an organozinc compound per kg support and combining the organozinc-treated support with an organometallic complex comprising a Group 3 to 10 transition metal, M, and at least one indenolindolyl ligand that is bonded to M.
2. (original): The process of claim 1 wherein the Group 3 to 10 transition metal is a Group 4 transition metal.
3. (original): The process of claim 1 wherein the activator is selected from the group consisting of alumoxanes, alkylaluminum compounds, organoboranes, ionic borates, ionic aluminates, aluminoboronates and mixtures thereof.
4. (original): The process of claim 1 wherein some or all of the activator is premixed with the organometallic complex, and this mixture is added to the organozinc-treated support.
5. (original): The process of claim 1 wherein the olefin is selected from the group consisting of ethylene, propylene, 1-butene, 1-pentene, 1-hexene and 1-octene and mixtures thereof.
6. (original): The process of claim 5 wherein the olefin is ethylene in combination with a second olefin selected from the group consisting of 1-butene, 1-hexene and 1-octene.
7. (canceled).
8. (original): The process of claim 1 wherein the organozinc compound is selected from the group consisting of dimethylzinc and diethylzinc.
9. (original): The process of claim 1 wherein the support is selected from the group consisting of silicas, aluminas, and silica-aluminas.
10. (original): The process of claim 1 wherein the polymerization is performed at a temperature within the range of about 30°C to about 100°C.
11. (original): A slurry polymerization process of claim 1.

12. (original): A gas-phase polymerization process of claim 1.
13. (original): The process of claim 1 wherein the indenoindolyl ligand has a structure selected from the group consisting of:



in which  $R_1$  is selected from the group consisting of  $C_1$ - $C_{30}$  hydrocarbyl, dialkylboryl, trialkylsilyl and divalent radicals connected to a second ligand; each  $R_2$  is independently selected from the group consisting of  $C_1$ - $C_{30}$  hydrocarbyl, H, F, Cl and Br;  $R_3$  is selected from the group consisting of  $C_1$ - $C_{30}$  hydrocarbyl, H and divalent radicals connected to a second ligand wherein one of  $R_1$  or  $R_3$  is a divalent radical selected from the group consisting of hydrocarbyl and heteroatom containing alkylene radicals, diorganosilyl radicals, diorganogermanium radicals and diorganotin radicals.

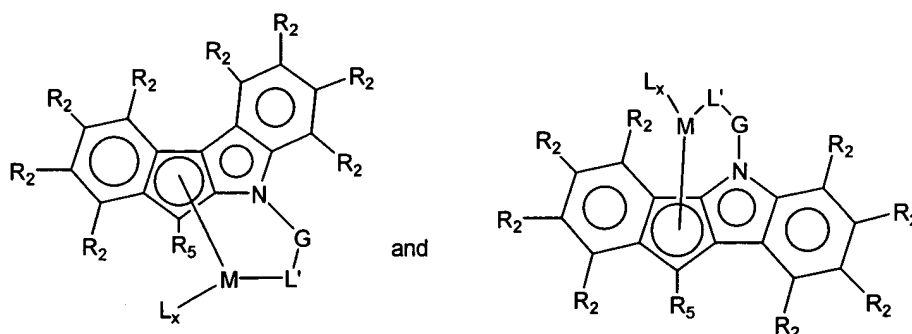
14. (original): The process of claim 1 wherein the organometallic complex has a structure selected from the group consisting of:



wherein M is a Group 3 to 10 transition metal; each L is independently selected from the group consisting of halide, alkoxy, aryloxy, siloxy, alkylamino, and  $C_1$ - $C_{30}$  hydrocarbyl;  $L'$  is selected from the group consisting of alkylamido, substituted or unsubstituted cyclopentadienyl,

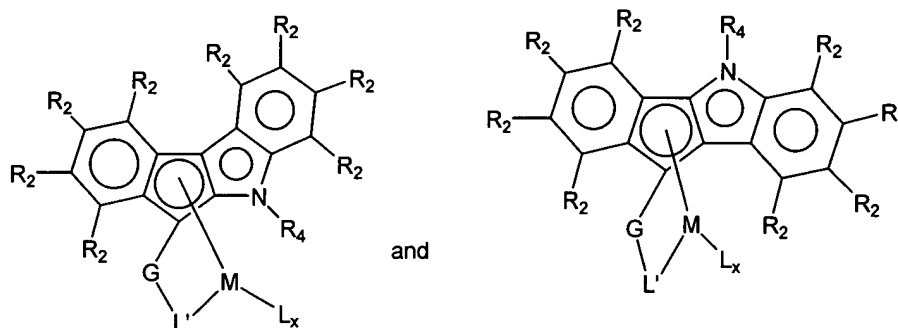
fluorenyl, indenyl, boraaryl, pyrrolyl, azaboroliny and indenoindolyl; x satisfies the valence of M;  $R_4$  is selected from the group consisting of  $C_1$ - $C_{30}$  hydrocarbyl, dialkylboryl and trialkylsilyl; each  $R_2$  is independently selected from the group consisting of  $C_1$ - $C_{30}$  hydrocarbyl, H, F, Cl and Br; G is a divalent radical selected from the group consisting of hydrocarbyl and heteroatom containing alkylene radicals, diorganosilyl radicals, diorganogermanium radicals and diorganotin radicals.

15. (original): The process of claim 14 wherein  $L'$  is selected from the group consisting of substituted or unsubstituted cyclopentadienyl, fluorenyl, indenyl, and indenoindolyl.
16. (original): The process of claim 1 wherein the organometallic complex has a structure selected from the group consisting of:



wherein M is a Group 3 to 10 transition metal; each L is independently selected from the group consisting of halide, alkoxy, aryloxy, siloxy, alkylamino, and  $C_1$ - $C_{30}$  hydrocarbyl;  $L'$  is selected from the group consisting of alkylamido, substituted or unsubstituted cyclopentadienyl, fluorenyl, indenyl, boraaryl, pyrrolyl, azaboroliny and indenoindolyl; x satisfies the valence of M;  $R_5$  is selected from the group consisting of  $C_1$ - $C_{30}$  hydrocarbyl and H, ; each  $R_2$  is independently selected from the group consisting of  $R_5$ , F, Cl and Br; G is a divalent radical selected from the group consisting of hydrocarbyl and heteroatom containing alkylene radicals, diorganosilyl radicals, diorganogermanium radicals and diorganotin radicals.

17. (currently amended): A method which comprises treating a support with about 0.1 to about 2 moles of an organozinc compound per kg support and combining the treated support with an organometallic complex comprising a Group 3 to 10 transition metal, M, and at least one indenoindolyl ligand that is bonded to M.
18. (original): The method of claim 17 wherein the support is selected from the group consisting of silicas, aluminas, and silica-aluminas.
19. (original): The method of claim 17 wherein the organozinc compound is selected from the group consisting of dimethylzinc and diethylzinc.
20. (original): The method of claim 17 wherein the organometallic complex has a structure selected from the group consisting of:



wherein M is a Group 4 transition metal; each L is independently selected from the group consisting of halide, alkoxy, aryloxy, siloxy, alkylamino, and C<sub>1</sub>-C<sub>30</sub> hydrocarbyl; L' is selected from the group consisting of alkylamido, substituted or unsubstituted cyclopentadienyl, fluorenyl, indenyl, boraaryl, pyrrolyl, azaborolinyll and indenoindolyl; x satisfies the valence of M; R<sub>4</sub> is selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> hydrocarbyl, dialkylboryl and trialkylsilyl; each R<sub>2</sub> is independently selected from the group consisting of C<sub>1</sub>-C<sub>30</sub> hydrocarbyl, H, F, Cl and Br; G is a divalent radical selected from the group consisting of hydrocarbyl and heteroatom containing alkylene radicals, diorganosilyl radicals, diorganogermanium radicals and diorganotin radicals.

21. (original): The method of claim **17** wherein the complex is premixed with an activator prior to combining with the organozinc-treated support.
22. (original): The method of claim **17** wherein the organozinc-treated support is combined with an activator prior to combining with the organometallic complex.